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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,528	04/07/2006	Alwin Hermann Schwitzer	1-17013	8981
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MARSHALL & MELHORN, LLC				
FOUR SEAGATE - EIGHTH FLOOR				
TOLEDO, OH 43604				
EXAMINER				
NILAND, PATRICK DENNIS				
ART UNIT		PAPER NUMBER		
1796				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/533,528

**Applicant(s)**

SCHWITZER ET AL.

**Examiner**

Patrick D. Niland

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CD/CD)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

1. The amendment of 11/21/07 has been entered. Claims 18-37 are pending.
2. Claims 18-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. It is unclear what is intended by “branched graft polyamide” of the instant claims. It is unclear if some additional branching is required by “branched” and if so where the branching is required and how much further branching is required in addition to the grafts or if “branched” is merely redundant to “graft”. The applicant’s argument and reference to components b1) and b2) features is noted, however it is not seen where the redundancy of “branched graft polyamide” is explained anywhere in these arguments or referenced component descriptions. The scope of this claim language remains unclear.

B. The instantly claimed component b.1) requires “the molecular weight of the basic structure unit being between a 600 and 9000 g/mol”. It is unclear if this molecular weight related to a polymeric species is intended to be an average molecular weight known to the skilled artisan in polymers, if so, what type of average is required, or is requiring that all of the recited units have to be within the range of 600-9000 g/mol. In the latter instance it is unclear if a polydispersity of one or some other value is intended. Reference to number average molecular weight of approximately 1000 in the applicant’s arguments regarding paragraphs B, C) of the prior office action is noted. However, the claims continue to recite only molecular weight. It is improper to read limitations into the claims from other places and the instant claims do not particularly point out and distinctly claim the subject matter which applicant regards as the

invention because they do not recite number average molecular weight. The above lack of clarity remains. This rejection is maintained.

C. It is unclear what is intended by “polyamine acid chains” of component b.1). This moiety is not described in the instant specification adequately. The document referenced in the specification as describing these compounds recites a polyamino acid. The scope of the two terms would appear to differ greatly since the claimed term is not defined in the instant application. The applicant’s explanation and statement that the above term has been correctly rewritten is noted. However, the claim continues to read “polyamine acid chains”. This rejection is maintained.

D. The instant claims recite amounts in “parts”. It is unclear if these “parts” are by weight, volume, or some other basis. The examiner does not see “parts by weight” in claim 18. This rejection is maintained.

E. The Markush groups of claims 22, 23, and 27 are of improper form since there is no recitation of “or” prior to the last member. The lack of any term prior to the last member makes it unclear if all of the members are to be selected or if there are other members intended to be encompassed by the recited Markush group. It is unclear what is intended by the language of these claims therefore. See MPEP 2111.03 [R-3] Transitional Phrases.

F. It is unclear if claim 23 is intended to change the scope of component b to those graft polyamides which are derived from PA6, PA11, PA12 and have more than 3 arms as broadly required by claim 23 or the graft polyamides which have these properties and those of claim 18. As claim 23 is written, it seems to increase the scope of component b. As stated above, claim 18 continues to recite “polyamine acid chains”. Therefore, there is no antecedent basis in claim 18

for “the polyamino acid chains” and the above lack of clarity remains. This rejection is therefore maintained.

G. It is unclear in claim 24 if “above the melting temperature” refers to the melting temperature of the polyamide molding material or the graft polyamide b. The examiner has not questioned that b has the defined relative and melt viscosity. The examiner questions what “above the melting temperature” refers to, e.g. above the melting temperature of what? The applicant's response does not clarify this issue. This rejection is maintained.

H. It is unclear if claim 26 is requiring only that the polyamides b have the same polydispersity as the polyamide a or if the Mn and Mw of polyamides a and b must be the same. The applicant's response is noted. However, the claim language does not make the apparent answer clear. Thus, the claim does not particularly point out and distinctly claim the subject matter which applicant regards as the invention because they do not recite number average molecular weight. The above lack of clarity remains in that it remains unclear from the claim language if only polydispersity index need be approximately corresponded to or if the entire molecular weight distribution need be approximately corresponded to molecule per molecule as approximated by having approximately corresponding number and weight average weights. This rejection is maintained.

I. It is unclear what is intended by the abbreviations of claims 27 and 28. The examiner does not see PA 61, MXDI, MACM12, and PACM12 defined in the supplied standard. The lack of clarity remains and this rejection is therefore maintained.

J. It is unclear what is required of the Markush group of claim 31 due to the use of “and” twice. It is therefore unclear which thing is the last member of the Markush group and what other things are encompassed by the open Markush language.

K. It is unclear what is intended by “MXDA” and “PXDA” of claim 36.

3. Claims 18-37 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the disclosed “polyamine acids”, does not reasonably provide enablement for the entire scope of “polyamine acids”. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

A. It is unclear what is intended to be encompassed by the “polyamide acid chains” of the claimed component b.1. This term is not adequately described in the instant specification such that its scope can be determined. References to EP 345648 A2 and EP 409115 are noted. However, these documents are not incorporated by reference as required by MPEP 608.01(p) I. INCORPORATION BY REFERENCE

>37 CFR 1.57. Incorporation by reference. The above discussed claimed material is “essential material” required to determine the scope of and understand the claimed invention. 37 CFR 1.57. Incorporation by reference clearly excludes incorporating essential material by reference the referenced documents though the applicant’s language is not even an incorporation by reference. For these reasons, the applicant’s specification fails to comply with the enablement requirement for the entire scope of the instant claims. The applicant’s explanation, which supports this rejection regarding scope of enablement, and statement that the above term has

been correctly rewritten is noted. However, the claim continues to read "polyamine acid chains".

This rejection is maintained.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 18-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 6211266 Weber et al. in view of EP 409115 A2 Schmid et al. (translation provided and referenced) and EP 345648 A2 Schmid et al. (translation provided and referenced).

Weber et al. discloses polyamide compositions containing partly crystalline polyamide A which falls within the scope of the instantly claimed component A)a) and its amount, C which encompasses the instantly claimed component A)b.1) and its amount, components D and E which fall within the scope of the instantly claimed components B and C and their amounts, component B which encompasses the instantly claimed component A)b.2 and its amount. See the abstract and the remainder of the disclosure of Weber. All polymers have some amorphous character necessarily and therefore the portion of the polyamides of Weber falling within the scope of the amounts of the instantly claimed component A)c) fall within the scope of the amorphous polyamides A)c) of the instant claims.

Weber does not disclose the specific polymers b) of the instant claims. The instant specification states that the instantly claimed polymers b.1 and b.2 are those of the cited Schmid references.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the instantly claimed mixtures of ingredients and amounts thereof in the compositions of Weber including the instantly claimed components b.1 and/or b.2 in the instantly claimed amounts in the compositions of Weber because, as stated above, Weber encompasses such polyamides in their compositions, and the benefits of these graft polyamides described in the above cited Schmid et al. references would have been expected in the compositions of Weber containing these graft polyamides. See Schmid (EP 345648 A2), page 4 in its entirety, page 10, lines 20-23 which states that these polyamides may be used in polymer blends and will give the benefits described to these blends and the other graft polyamide properties described by Schmid would also be expected in such polymer blends. See the entire document, particularly page 16, lines 1-14 and the figures. See Schmid (EP 409115 A2), page 1, lines 1-2 and 21-22 of text after the "Applicant" line, page 2 in its entirety, page 4, lines 10-22, table 2 of page 5, and the remainder of the document. The benefits described for these graft polyamides by Schmid would also be expected in such polymer blends of Weber. Given the similarities of the compositions of the instant claims and those of Weber, it is not seen that the compositions of Weber would not necessarily have the broadly claimed properties of the instant claims with or without the above discussed modifications.

The argument that nothing in Weber discloses component C as being branched grafted polyamides ignores the teachings of the secondary references which are cited as rationale to use the instantly claimed components b1 and/or b2. Weber encompasses branched grafted polyamides and does not teach away from their use. The instant claims recite no language excluding the unsaturated nitrile copolymers of Weber. The argument that there is not



motivation in Weber to combine it with the cited Schmid et al. references is not persuasive because the Schmid references give the motivation to modify the styrene/maleimide copolymers of Weber into those of the instant claims for the reasons stated in the cited Schmid et al. references and as discussed above. The arguments to only Weber do not address the full scope of the rejection, particularly the combination of Weber with the Schmid et al. references. The argument that a semicrystalline and amorphous polyamide are required by a and c of component A of claim 18 ignores the fact that the scopes of these terms overlaps, e.g. semicrystalline has amorphous segments and therefore is both semicrystalline and amorphous. The recited "partly crystalline polyamide" of Weber therefore meets both a and c of the instant claims since there are insufficient limitations in the instant claims to distinguish these components from the partly crystalline polyamide of Weber. It is noted that "partly crystalline" clearly implies that there is a part that is not crystalline. The only other option is amorphous. The applicant's arguments in this regard are therefore not persuasive. The applicant argues regarding component B of Weber with component A)b)2. Again, Weber is combined with the Schmid et al. references for components A)b)1 and A)b)2. Arguments directed to only Weber for this component or motivation that ignore the teachings of the Schmid references do not address the full scope of the rejection nor the motivation the ordinary skilled artisan would have found within the Schmid references when taken with the teachings of Weber. This rejection is therefore maintained.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Patrick D Niland/  
Primary Examiner,  
Art Unit 1796